AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A constant velocity fixed joint comprising;

an outer joint part having a longitudinal axis (L12), and an attaching end and an aperture end positioned axially opposite one another, and outer ball tracks;

an inner joint part having a longitudinal axis (L13), an attaching mechanism for a shaft pointing towards the aperture end of the outer joint part, and inner ball tracks, the outer ball tracks and the inner ball tracks form pairs of tracks which each accommodate a torque transmitting ball, wherein each two adjoining pairs of tracks comprise outer ball tracks whose center lines are positioned in planes (E1, E2) which extend substantially parallel relative to one another, and inner ball tracks whose center lines are positioned in planes (E1', E2') which extend substantially parallel relative to one another; and

an annular ball cage between the outer joint part and the inner joint part and comprising circumferentially distributed cage windows which each accommodate the torque transmitting balls of two of said adjoining pairs of tracks;

wherein, in an aligned joint, centers (K_1, K_2) of the balls are held by the ball cage in the joint center plane (EM) and, when the joint is articulated, the ball centers are guided onto the angle-bisecting plane between the longitudinal axes (L12, L13);

wherein track cross-sections of the outer ball tracks and the inner ball tracks of each pair of tracks are symmetrical relative to axes of symmetry (ES_1, ES_2) which, together with the outer and inner ball track planes (E1, E2, E1', E2'), form identically sized angles [[(φ_1, .φ_2)]](φ_1, φ_2)opening in opposite directions, and each comprise a common point (M, M'); and

wherein the track cross-sections of the outer ball tracks and the inner ball tracks are formed so as to generate contact with the balls in two points.

14. (Previously Presented) A joint according to claim 1, wherein the track cross-sections of the outer ball tracks and of the inner ball tracks of each pair of tracks are each symmetrical relative to radial rays (RS1, RS2) from the longitudinal axes (L12, L13) through the ball centers (K1, K2) of the torque transmitting balls of the pair of tracks.

15. (Previously Presented) A joint according to claim 1, wherein the track cross-sections of the outer ball tracks and of the inner ball tracks of each pair of tracks are each symmetrical relative to straight lines (PS_1, PS_2) which are positioned in a cross-sectional plane and which extend parallel to radial rays (RS1, RS2) from the longitudinal axes (L12, L13) through the ball centers of the torque transmitting balls of the pair of tracks and which intersect one another in a common point (M') at a distance from the longitudinal axes.

16. (Previously Presented) A joint according to claim 1, wherein the angles (φ_1, φ_2) range from 0.8 φ_0 to 1.3 φ_0, wherein 2 φ_0 constitutes a center angle in an aligned joint between radial rays from the longitudinal axes through the ball centers (K1, K2) of the balls of two of said adjoining pairs of tracks.

17. (Previously presented) A joint according to claim 14, wherein the angles (φ_1, φ_2) range from 0.8 φ_0 to 1.3 φ_0, wherein 2 φ_0 constitutes a center angle in an aligned joint between radial rays from the longitudinal axes through the ball centers (K1, K2) of the balls of two of said adjoining pairs of tracks.

18. (Previously Presented) A joint according to claim 15, wherein the angles (φ_1, φ_2) range from 0.8 φ_0 to 1.3 φ_0, wherein 2 φ_0 constitutes a center angle in an aligned joint between radial rays from the longitudinal axes through the ball centers (K1, K2) of the balls of two of said adjoining pairs of tracks.

19. (Previously Presented) A joint according to claim 1, wherein the track center lines of the outer ball tracks and of the inner ball tracks are positioned in planes (E1, E2) which extend parallel relative to one another and parallel relative to the longitudinal axes of the joint and which extend through the ball centers of the balls of two of said adjoining pairs of tracks.

20. (Previously Presented) A joint according to claim 14, wherein the track center lines of the outer ball tracks and of the inner ball tracks are positioned in planes (E1, E2) which extend parallel relative to one another and parallel relative to the longitudinal axes of the joint and which extend through the ball centers of the balls of two of said adjoining pairs of tracks.

21. (Previously Presented) A joint according to claim 15, wherein the track center lines of the outer ball tracks and of the inner ball tracks are positioned in planes (E1, E2) which extend parallel relative to one another and parallel relative to the longitudinal axes of the joint and which extend through the ball centers of the balls of two of said adjoining pairs of tracks.

22. (Previously Presented) A joint according to claim 16, wherein the track center lines of the outer ball tracks and of the inner ball tracks are positioned in planes (E1, E2) which extend parallel relative to one another and parallel relative to the longitudinal axes of the joint and which extend through the ball centers of the balls of two of said adjoining pairs of tracks.

23. (Previously Presented) A joint according to claim 1, wherein track center lines (M22) of the outer ball tracks extend in first planes (E1, E2) and center lines (M23) of the inner ball tracks extend in second planes (E1', E2') which are parallel relative to one another and extend through the ball centers of the balls of two of said adjoining pairs of tracks and which are at identical perpendicular distances from the joint center (M), and wherein, together with the longitudinal axes, they form identically sized angles of intersection (Y_0, Y_0') extending in opposite directions.

24. (Previously Presented) A joint according to claim 14, wherein track center lines (M22) of the outer ball tracks extend in first planes (E1, E2) and center lines (M23) of the inner ball tracks extend in second planes (E1', E2') which are parallel relative to one another and extend through the ball centers of the balls of two of said adjoining pairs of tracks and which are at identical perpendicular distances from the joint center (M), and wherein, together with the longitudinal axes, they form identically sized angles of intersection (Y_0, Y_0') extending in opposite directions.

25. (Previously Presented) A joint according to claim 15, wherein track center lines (M22) of the outer ball tracks extend in first planes (E1, E2) and center lines (M23) of the inner ball tracks extend in second planes (E1', E2') which are parallel relative to one another and extend through the ball centers of the balls of two of said adjoining pairs of tracks and which are at identical perpendicular distances from the joint center (M), and wherein, together with the longitudinal axes, they form identically sized angles of intersection (Y_0, Y_0') extending in opposite directions.

26. (Previously Presented) A joint according to claim 16, wherein track center lines (M22) of the outer ball tracks extend in first planes (E1, E2) and center lines (M23) of the inner ball tracks extend in second planes (E1', E2') which are parallel relative to one another and extend through the ball centers of the balls of two of said adjoining pairs of tracks and which are at identical perpendicular distances from the joint center (M), and wherein, together with the longitudinal axes, they form identically sized angles of intersection (Y_0, Y_0') extending in opposite directions.

27. (Previously Presented) A joint according to claim 23, wherein the angles of intersection (Y_0, Y_0') are selected in such a way that spatial control angles (ε_0, ε_0') of the pairs of tracks at the balls have the same value irrespective of whether the load turns clockwise or anti-clockwise.

28. (Previously Presented) A joint according to claim 27, wherein with a center angle $2\varphi_0$ between radial rays (RS1, RS2) through the ball centers of the balls of two of said adjoining pairs of tracks, the angle of intersection (Y_0) is calculated in accordance with the equation $Y_0 = \varepsilon_0 x \tan\varphi_0$.

29. (Previously Presented) A joint according to claim 1, wherein an opening angle (α_1, α_1) between tangents at the base lines of two of said adjoining pairs of tracks in an aligned joint in the joint center plane (EM) each open in the same direction.

30. (Previously Presented) A joint according to claim 1, wherein an opening angle (α_1, α_1) between tangents at the track base lines in the joint center plane (EM) of two of said adjoining pairs of tracks in an aligned joint open in opposite directions.

31. (Previously Presented) A joint according to claim 30, wherein the balls of two of said adjoining pairs of tracks in an aligned joint are positioned on different pitch circle radii (PCR).

32. (Previously Presented) A joint according to claim 1, wherein the track cross-sections of the outer ball tracks and of the inner ball tracks are formed by one of parabolic, ellipsoidal portions, and by gothic arches which each generate contact with the balls in the two points.

34. (Currently Amended) A constant velocity fixed joint comprising:

an outer joint part having a longitudinal axis (L12), and an attaching end and an aperture end positioned axially opposite one another, and outer ball tracks;

an inner joint part having a longitudinal axis (L13), an attaching mechanism for a shaft pointing towards the aperture end of the outer joint part, and inner ball tracks, the outer ball tracks and the inner ball tracks form pairs of tracks which each accommodate a torque transmitting ball, wherein each two adjoining pairs of tracks comprise outer ball tracks whose center lines are positioned in planes (E1, E2) which extend substantially parallel relative to one another, and inner ball tracks whose center lines are positioned in planes (E1', E2') which extend substantially parallel relative to one another; and

an annular ball cage between the outer joint part and the inner joint part and comprising circumferentially distributed cage windows which each accommodate the torque transmitting balls of two of said adjoining pairs of tracks;

wherein, in an aligned joint, centers ~~(K.sub.1, K.sub.2)~~ (K_1, K_2)of the balls are held by the ball cage in the joint center plane (EM) and, when the joint is articulated, the ball centers are guided onto the angle-bisecting plane between the longitudinal axes (L12, L13);

wherein track cross-sections of the outer ball tracks and the inner ball tracks of each pair of tracks are symmetrical relative to axes of symmetry ~~(ES.sub.1, ES.sub.2)~~ (ES_1, ES_2)which, together with the outer and inner ball track planes (E1, E2, E1', E2'), form identically sized angles ~~(.phi..sub.1, .phi..sub.2)~~ (φ_1, φ_2) opening in opposite directions, and each comprise a common point (M, M'); and

wherein the track cross-sections of the outer ball tracks and the inner ball tracks are formed so as to generate contact with the balls in one point.

35. (Previously Presented) A joint according to claim 34, wherein track cross-sections of the outer ball tracks and inner ball tracks are formed by circular portions whose centers of curvature are positioned at a distance from one another on a respective radial ray (RS1, RS2), and wherein their radius of curvature is greater than the ball radius, and which circular portions generate contact with the balls in the one point.